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10/735,409	12/12/2003	Seungyun Yoon	TN327	2102

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EXAMINER
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TA, THO DAC

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/735,409	<b>Applicant(s)</b> YOON ET AL.	
	<b>Examiner</b> Tho D. Ta	<b>Art Unit</b> 2833	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15-25 and 33-45 is/are rejected.
- 7) ☒ Claim(s) 8-14 and 26-32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/12/03</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: ____ |
|--|--|

## DETAILED ACTION

### *Claim Objections*

1. Claims 9-12 are objected to because of the following informalities: claim 9, line 2, the term "first projections" lacks antecedent basis. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Bobb et al. (4,332,431).

In regard to claim 1, Bobb et al. discloses an electrical connector 1 for receiving a circuit card 92 having a card edge including a plurality of electrical contacts 94, the electrical connector 1 comprising: a body 24 having portions for connecting the electrical connector 1 to external circuit elements 88, a slot 30 formed in the body 24 for receiving the card edge, wherein the slot 30 has a size which substantially corresponds to the card edge, and a plurality of pins 2 associated with the slot 30 and extending through the body 24, wherein the pins 2 are positioned for engagement with the electrical contacts 94 of the circuit card 92; and a release mechanism 48 enclosing portions 26 of the body 24 of the electrical connector 1 and the pins 2 associated with the slot 30, for urging the pins 2 into the slot 30 when the release mechanism 48

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assumes a first operating position, and for drawing the pins 2 out of the slot 30 when the release mechanism 48 assumes a second operating position (fig. 7).

In regard to claim 2, Bobb et al. discloses that the release mechanism 48 comprises: a cover 66 extending longitudinally along the body 24, and extending along the slot 30, wherein the cover 66 is movable between the first operating position and the second operating position (fig. 7); and a pin holder 34A coupled with the cover 66 and with the body 24, for transverse movement relative to the slot 30, wherein the plurality of pins 2 are attached to the pin holder 34A.

4. Claims 1-7, 15-25, 33-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Jayne et al. (4,060,300).

In regard to claim 1, Jayne et al. discloses an electrical connector 2 for receiving a circuit card (see fig. 2) having a card edge including a plurality of electrical contacts (it is inherent), the electrical connector 2 comprising: a body 6 having portions (bottom of 6) for connecting the electrical connector 2 to external circuit elements (mother board), a slot (between 16 and 18) formed in the body 6 for receiving the card edge, wherein the slot has a size which substantially corresponds to the card edge, and a plurality of pins 74, 76 associated with the slot and extending through the body 6, wherein the pins 74, 76 are positioned for engagement with the electrical contacts of the circuit card; and a release mechanism 88, 90 enclosing portions 8, 10 of the body 6 of the electrical connector 2 and the pins 74, 76 associated with the slot, for urging the pins 74, 76 into

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the slot when the release mechanism 88, 90 assumes a first operating position (left side of fig. 2), and for drawing the pins 74, 76 out of the slot when the release mechanism 88, 90 assumes a second operating position (right side of fig. 2).

In regard to claim 2, Jayne et al. discloses that the release mechanism 88, 90 comprises: a cover extending longitudinally along the body 6, and extending along the slot, wherein the cover 88, 90 is movable between the first operating position and the second operating position; and a pin holder 42, 44 coupled with the cover 88, 90 and with the body 6, for transverse movement relative to the slot, wherein the plurality of pins 74, 76 are attached to the pin holder 42, 44.

In regard to claim 3, Jayne et al. discloses that the release mechanism 88, 90 includes a pair of pin holders 42, 44 positioned on opposite sides of the slot, wherein the plurality of pins 74, 76 are attached to the pair of pin holders 42, 44, and wherein each of the pin holders 42, 44 is coupled with the cover 88, 90.

In regard to claim 4, Jayne et al. discloses that the pin holder 42, 44 includes a web 46, 48 having face portions 70, 72 for receiving the plurality of pins 74, 76.

In regard to claim 5, Jayne et al. discloses that the web 46, 48 has base portions (the bottom portion of 46, 48) for engaging a cavity (bottom portion of 16, 18) formed in the body 6 (column 4, lines 51-55).

In regard to claim 6, Jayne et al. discloses that the cover 88, 90 includes a cavity (portion between 106 and the wall of cover 88, see fig. 2) for receiving upper portions 62, 64 of the web 46, 48.

In regard to claim 7, Jayne et al. discloses that the pins 74, 76 have electrical contacts 80 associated with the upper portions the web 46, 48, and wherein the electrical contacts 80 are positioned adjacent to the slot.

In regard to claim 15, Jayne et al. discloses that the cover 88, 90 includes a handle 114 extending from the cover 88, 90.

In regard to claim 16, Jayne et al. discloses that the slot extends longitudinally between opposing ends of the body 6, wherein the electrical connector 2 further includes an opening (adjacent 12 in fig. 1) formed in an end of the body 6 and an opening (between 110 of 88 and 110 of 90 after assembling with the body 6) formed in an end of the cover 88, 90, and wherein the opening in the body 6 and the opening in cover 88, 90 have a size which substantially corresponds to the card edge, for slidingly receiving the circuit card in the slot through the openings.

In regard to claim 17, Jayne et al. discloses that the opening formed the end of the body 6 is in substantial alignment with the opening formed in the end the cover 88, 90.

In regard to claim 18, Jayne et al. discloses that the release mechanism 88, 90 includes a handle 114 extending from the cover 88, 90, and wherein the handle 114 is adjacent to the openings and spaced from the openings to allow the card edge to pass the handle 114.

In regard to claim 19, Jayne et al. discloses an electrical connector 2 for receiving a circuit card having a card edge including a plurality of electrical contacts, the electrical connector 2 comprising: a body 6 having portions for connecting the electrical connector 2 to external circuit elements, a slot formed in the body 6 for receiving the card edge, wherein the slot has a size which substantially corresponds to the card edge, and a plurality of pins 74, 76 associated with the slot and extending through the body 6, wherein the pins 74, 76 are positioned for engagement with the electrical contacts of the circuit card; a cover 88, 90 coupled with the body 6 and extending longitudinally along the body 6 and the slot, wherein the cover 88, 90 is movable between a first operating position and a second operating position; and a pin holder 42, 44 receiving the plurality of pins 74, 76 and coupled with the cover 88, 90 and with the body 6, for transverse movement relative to the body 6 and the slot responsive to movement of the cover 88, 90 between the first operating position and the second operating position.

In regard to claim 20, Jayne et al. discloses that the pin holder 42, 44 is moved toward the slot when the cover 88, 90 is in the first operating position (left hand side of fig. 2), and wherein the pin holder 42, 44 is moved away from the slot when the cover 88, 90 is in the second operating position (right hand side of fig. 2).

In regard to claim 21, Jayne et al. discloses that a pair of pin holders 42, 44 positioned on opposite sides of the slot, wherein the plurality of pins 74, 76 are attached to the pair of pin holders 42, 44, and wherein each of the pin holders 42, 44 is coupled with the cover 88, 90.

In regard to claim 22, Jayne et al. discloses that the pin holder 42, 44 includes a web 46, 48 having face portions 70, 72 receiving the plurality of pins 74, 76.

In regard to claim 23, Jayne et al. discloses that the web 46, 48 has base portions (the bottom portion of 46, 48) for engaging a cavity (bottom portion of 16, 18) formed in the body 6 (column 4, lines 51-55).

In regard to claim 24, Jayne et al. discloses that the cover 88, 90 includes a cavity (portion between 106 and the wall of cover 88, see fig. 2) for receiving upper portions 62, 64 of the web 46, 48.



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In regard to claim 25, Jayne et al. discloses that the pins 74, 76 have electrical contacts 80 associated with the upper portions the web 46, 48, and wherein the electrical contacts 80 are positioned adjacent to the slot.

In regard to claim 33, Jayne et al. discloses that the cover 88, 90 includes a handle 114 extending from the cover 88, 90.

In regard to claim 34, Jayne et al. discloses that the slot extends longitudinally between opposing ends of the body 6, wherein the electrical connector 2 further includes an opening (adjacent 12 in fig. 1) formed in an end of the body 6 and an opening (between 110 of 88 and 110 of 90 after assembling with the body 6) formed in an end of the cover 88, 90, and wherein the opening in the body 6 and the opening in cover 88, 90 have a size which substantially corresponds to the card edge, for slidingly receiving the circuit card in the slot through the openings.

In regard to claim 35, Jayne et al. discloses that the opening formed the end of the body 6 is in substantial alignment with the opening formed in the end the cover 88, 90.

In regard to claim 36, Jayne et al. discloses that the release mechanism 88, 90 includes a handle 114 extending from the cover 88, 90, and wherein the handle 114 is adjacent to the openings and spaced from the openings to allow the card edge to pass

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the handle 114.

In regard to claim 37, Jayne et al. discloses a connector 2 for receiving a circuit card having a card edge including a plurality of electrical contacts, wherein the electrical connector 2 comprises: a body 6 having portions connecting the electrical connector to the module box, a slot formed in the body 6 for receiving the card edge, wherein the slot has a size which substantially corresponds to the card edge, and a plurality of pins 74, 76 associated with the slot and extending through the body 6, wherein the pins 74, 76 are positioned for engagement with the electrical contacts of the circuit card; cover 88, 90 coupled with the body 6 and extending longitudinally along the body 6 and the slot, wherein the cover 88, 90 is movable between a first operating position and a second operating position; and a pin holder 42, 44 receiving the plurality of pins 74, 76 and coupled with the cover 88, 90 and with the body 6, for transverse movement relative to the body 6 and the slot responsive to movement of the cover 88, 90 between the first operating position and the second operating position.

Although Jayne et al. does not specifically disclosed the claimed module box, this feature is seen to be an inherent teaching of that device since a body 6 having portions for connecting the electrical connector 2 to external circuit elements is disclosed and it is apparent that some type of module box must be present for the connector 2 to function as intended.

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In regard to claim 38, Jayne et al. discloses that the pin holder 42, 44 is moved toward the slot when the cover 88, 90 is in the first operating position (left hand side of fig. 2), and wherein the pin holder 42, 44 is moved away from the slot when the cover 88, 90 is in the second operating position (right hand side of fig. 2).

In regard to claim 39, Jayne et al. discloses that a pair of pin holders 42, 44 positioned on opposite sides of the slot, wherein the plurality of pins 74, 76 are attached to the pair of pin holders 42, 44, and wherein each of the pin holders 42, 44 is coupled with the cover 88, 90.

In regard to claim 40, Jayne et al. discloses that the cover 88, 90 includes a handle 114 extending from the cover 88, 90.

In regard to claim 41, Jayne et al. discloses that the slot extends longitudinally between opposing ends of the body 6, wherein the electrical connector 2 further includes an opening (adjacent 12 in fig. 1) formed in an end of the body 6 and an opening (between 110 of 88 and 110 of 90 after assembling with the body 6) formed in an end of the cover 88, 90, and wherein the opening in the body 6 and the opening in cover 88, 90 have a size which substantially corresponds to the card edge, for slidingly receiving the circuit card in the slot through the openings.

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In regard to claim 42, Jayne et al. discloses that the opening formed the end of the body 6 is in substantial alignment with the opening formed in the end the cover 88, 90.

In regard to claim 43, Jayne et al. discloses that the electrical connector 2 is free of structures for interfering with movement of the circuit card within the slot when the cover 88, 90 is in the second operating position.

In regard to claim 44, Jayne et al. discloses that the release mechanism 88, 90 includes a handle 114 extending from the cover 88, 90, and wherein the handle 114 is adjacent to the openings and spaced from the openings to allow the card edge to pass the handle 114.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jayne et al..

Jayne et al. does not disclose plural electrical connectors, for receiving plural circuit cards.

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It would have been obvious to have more than one connector, while the additional connector undoubtedly made it versatile, such a modification would have involved a mere change in the number of the parts. Duplication of parts for a multiplied effect is generally recognized as being within the level of ordinary skill in the art. *St Regis Paper Co. V. Bemis Co., Inc.*, 193 USPQ 8, 11 (7<sup>th</sup> Cir. 1977).

***Allowable Subject Matter***

7. Claims 8-14, 26-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to provide, teach or suggest the cover includes a plurality of projections extending into the cavity of the cover.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



THO D. TA  
PRIMARY EXAMINER

tdt

12/07/04